SCIENTIFIC AMERICAN.

THE ADVOCATE OF INDUSTRY AND ENTERPRISE, AND JOURNAL OF MECHANICAL AND OTHER IMPROVEMENTS.

VOLUME I.] NEW-YORK, THURSDAY, NOVEMBER 13, 1845. [NUMBER 9.

THE
SCIENTIFIC AMERICAN.
PUBLISHED EVERY THURSDAY MORNING, AT THE
Sun Buildings,
—Entrance 128 Fulton st., and 89 Nassau st.—
ALSO, AT NO. 12 STATE ST., BOSTON, AND NO. 21 ARCADE, PHILADELPHIA.
(The Principal Office being at New York,
BY RUFUS PORTER.

Each number of this paper is furnished with from two to five ORIGINAL ENGRAVINGS, many of them elegant, and illustrative of NEW INVENTIONS, SCIENTIFIC PRINCIPLES, and CURIOSITIES; and contains as much Interesting Intelligence as six ordinary daily papers, consisting of notices of the progress of Mechanical and other *Scientific Improvements*,—American and Foreign Inventions; Catalogues of American Patents;—Scientific Essays, illustrative of the principles of the Sciences of Mechanics, Chemistry, and Architecture;—Instruction in various Arts and Trades;—curious Philosophical Experiments r—Miscellaneous Intelligence, Poetry, and, occasionally, Music.

This paper is especially entitled to the patronage of Mechanics and Manufacturers, being the only paper in America devoted to the interests of those classes; but is particularly useful to Farmers, as it will not only apprise them of improvements in agricultural implements, but iustruct them in various mechanical trades, and guard them against impositions. As a family newspaper, it will convey more useful intelligence to children and young people, than five times its cost in school instruction. Another important argument in favor of this paper, is, that it will be worth two dollars at the end of the year, when the volume is complete, and will probably command that price in cash, if we may judge from the circumstance that old volumes of the "New York Mechanic," by the same editor, will now command double the original cost.

TERMS.—"The Scientific American" will be furnished to subscribers at $2, per annum,—one dollar in advance, and the balance in six months.

Five copies will be sent to one address six months, for four dollars in advance.

Any person procuring two or more subscribers, will be entitled to a commission of twenty-five cents each.

TERMS OF ADVERTISING.—For 10 lines, or less, 50 cents for the first, and 12 I-2 cents for every subsequent insertion.

Save the Fips.

BY SNAPS.

I met a man the other day,
Who in his own peculiar way,
Said—"save the fips, for fips makes dollars,
And one WELL MADE, a hundred follers."

A pinch of snuff may cost a penny,
That penny spent is gone forever—
Just like lamented Paganini,
Or snow drops falling in the river.

A merchant broke, will lose his credit—
Yes, wiser men than we have said it;
So broken dollars seldom find,
A friend to treat them very kind.

One fip gone, the charm is broken—
Like taking hair from out a locket,
Those remaining are no token,
They rest uneasy in the pocket.

Many fips, well stuck together,
Are barriers strong 'gainst wintry weather,
And as the old folk used to say,
Prepare us for a "rainy day."

A child may break some valued ware,
When man with all his skill can't mend it;
So of the fips kind friends take care—
A dollar broke, we're apt to spend it.

HolloW! Hollow!

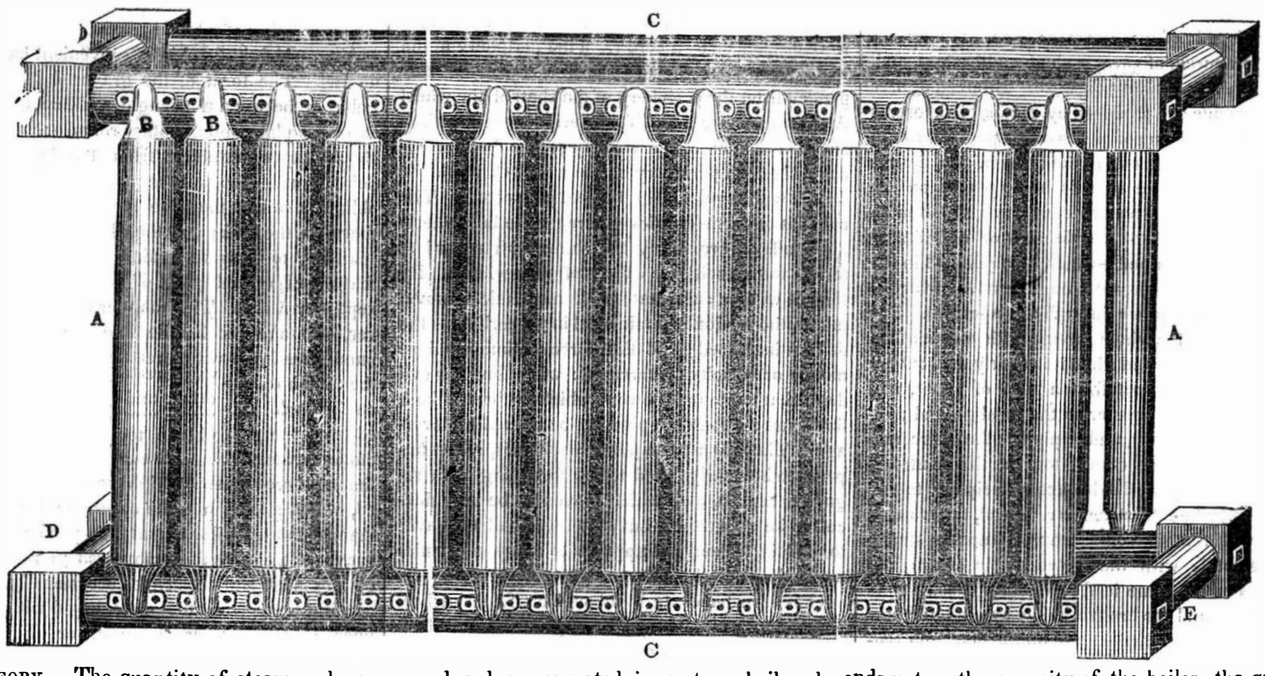
I stood beneath a hollow tree—
The blast it hollow blew—
I thought upon the hollow world,
And all its hollow crew,
I thought of all their hollow schemes,
The hollow hopes we follow,
Imagination's hollow dreams
All hollow, hollow, hollow!

A crown it is a hollow thing,
And hollow heads oft wear it:
The hollow title of a King,
What hollow hearts oft bear it!
No hollow wiles, or honeyed smiles
Of ladies fair, I follow;
For beauty sweet, still hides deeeit,
Tis hollow, hollow, hollow!

The hollow Tory but betrays
The hollow dupes who heed him;
The hollow critic vends his praise,
To hollow fools who feed him;
The hollow friend who takes your hand
Is but a summer swallow;
What e'er I see is like this tree,
All hollow, hollow, hollow!

A rat with a small bell fastened to his neck was killed the other day in Providence. Probably he was the *bell*-weather of the flock, and fell a victim to his generous efforts to warn his race of the approach of danger.

IMPROVED TUBULAR BOILER.



THEORY.—The quantity of steam and power produced or generated in a steam-boiler, depends not on the capacity of the boiler, the quantity of water, nor the quantity of fire applied; but is mainly dependent on the quantity or extent of the surface of water, exposed to the action or influence of fire. An ordinary cylindric boiler, of a proper size to produce ten-horse powers of steam, is fifteen feet in length and thirty inches in diameter; and as they are ordinarily adjusted, presents less than one-fourth part of its surface, or about 24 square feet of surface to the tion of heat. This surface is only equal to that of twenty-four tubes two feet long and two inches in diameter. Thus if 24 tubes three feet long and two inches in diameter are placed in a vertical position, filled two-thirds full of water, and embedded two feet deep in burning coals, they will produce even more steam power, than a cylindrical boiler of dimensions above specified. The 30 inch boiler, to sustain with safety a pressure of 100 lbs. per square inch, requires to be made of plates iron 1-4 inch thick; but a tube of two inches, requires only 1-15 of that thickness,—1-60 of an inch,—to sustain an equal pressure. But admitting the tubes to be of double strength,—of plate 1-30 of an inch,—still the 24 tubes will require only about 72 lbs., whereas the other boiler will weigh at least 1500 lbs. If it be asked whether this immense advantage has not been known to engineers, we answer that it has, and that several attempts have been made to introduce boilers made on this principle; but that no method has heretofore been discovered, of securing the connection of the tubes and communication between them, in a manner to admit of facility in cleansing them of sediment; and for want of this facility, those plans have been defeated. But we have proved *this* plan by actual operation, and found it perfectly free from any difficulty of management.

Explanation.—Two or more rows of vertical tubes, A A, are placed about ten inches apart, the spaces between the rows constituting the furnaces for the fire; grates being placed at the bottom to support it. The tubes of each row are placed near together, and each end of each tube is closed with a cylinder head, from which a short pipe, B, projects about two inches, and on opposite sides of each pipe, are small flat projections, turned ears, through which are screw-holes for the reception of screws, whereby the short pipes at the tops and bottoms of the tubes, are attached and secured to two parallel horizontal pipes, C C. The sides of each short pipe is nicely fitted to the sides of the horizontal pipes, and an aperture extends from the interior of one to that of other, thus effecting a complete communication between all the pipes and tubes above and below. Each end of each horizontal pipe is inserted in a metallic cube, D, and secured by means of a small iron rod, which extends through the length of the horizontal pipe and both cubes, and has a screw-nut on each end. Each of these four cubes is connected by a short horizontal pipes, E, to the corresponding cube of the next parallel four, which are immediately connected with the next row of tubes. The short horizontal pipes may be firmly brazed to the cubes, or may be secured by means of right and left screw-threads cut on the ends of the pipes. These tubes are to be enclosed in plate iron casing, as high as the intended surface of the water within; so that the fire may not come in contact with tubes above the water. The induction water pipe and the steam pipe with a safety-valve, &c., are attached to the upper horizontal pipes, which will be readily understood, though not represented in the engraving. A boiler of this description, of a capacity to work ten-horse power, will weigh about 200 lbs.

LABOR TO MAKE A WATCH.—Mr. Dent, in a lecture delivered before the London Royal Institute, made an allusion to the formation of a watch, and stated that a watch consists of 992 pieces; and that forty-three trades, and probably 215 persons are employed in making one of those little machines. The iron, of which the balance spring is formed, is valued at something less than a farthing; this produces an ounce of steel worth 4d. which is drawn into 2250 yards of steel wire, and represents in the market £13 4s; but still another process of hardening this originally farthing's worth of iron, renders it workable into 7650 balance springs, which will realize, at the common price of 2s. 5d. each, £946, 5s. the effect of labor alone. Thus it may be seen that the mere labor bestowed upon one farthing's worth of iron gives it the value of £000, 5s, or $4552, which is 75,980 times its original value.

THE HUDSON AND THE CANALS.—One of our cotemporaries has been at the pains to ascertain the extent of our river and canal trade, and he is far below the mark. "There are," says he, "in the river transportation between Troy, Albany, and New York, 62 tow-boats worth $435,000; 153 lake boats worth $80,000, and 12 steamboats, used for towing these, worth $250,000; also sloops and schooners of the value of 150,000—total $1.024,000. On the Erie canal there are running in the regular line 750 boats, worth $700,000. In towing these 3000 horses are employed, worth $160,000—total $860,000. Over $3,000,000 are employed in the steamboats and vessels running in connection with the canals, making, with the ware-houses worth $1,000,000, the capital thus invested over $6,000,000." The investment, we should think, would exceed ten millions, and increasing daily.

GENEVA WATCHES.—A correspondent of the Newark Advertiser says that one hundred thousand watches are manufactured at Geneva, annually, in which 3,000 men are employed, and for which are consumed 75,000 ounces of gold, five thousand marks of silver, and precious stones to the value of a million of francs. To prevent deceit in the alloy of metals used, the government appoints a *bureau de surveillance* to inspect every manufacture of gold and silver made in the town.

SILK.—There will shortly be a struggle to determine which State makes the most as well as the best silk. The best silk in the country is from cocoons, spun in Vermont. It is larger and stronger than silk raised in any of the Southern or Western States. The Vermont silk brings a higher price at Patterson' N. J., (say $5 25 per lb.) than silk from any other State.

A BIG SHARK STORY.—An eastern paper relates that ex-Governor Morton, when a Judge, happening in conversation with Capt. Taylor on the subject of Taylor's Submarine dress, expressed apprehension of danger from sharks, and related that a shark once chased a boat, and the men heated a large shot red hot, and threw it over to him—he swallowed it and it burnt out, whereupon he turned round and caught it again, and did so two or three times before it reached the bottom. The company maintained their gravity from respect to the judge, until one gentleman declared "it was a fact—for," said he, "a friend of mine was sculling near the shark at the time. The shark became so exasperated that he swallowed my friend, boat and all, and he immediately *stuck the oar out of the hole made by the shot, and sculled ashore!*" The judge mizzled, and made strait fo the door, and has not alluded to the subject since.

PILING UP JOKES.—Speaking of wags—what is more waggish than a dog's tail when he is pleased? Speaking of tails, we always like those that end well. Hogg's, for instance. Speaking of hogs—we saw one of those animals the other day lying in the gutter, and in the opposite one a well dressed man; the first had a ring in his nose, and the latter had a ring on his finger. The man was drunk, the hog was sober. "A hog is known by the company he keeps," thought we; so thought Mr. Porker, and off he went. Speaking of going off puts us in mind of a gun we once owned—it went off one night, and we haven't seen it since. Speaking of guns, reminds us of a dog which is sure to go off whenever he sees a gun, whether the gun goes off or or not. Speaking of dogs reminds us that a Mr. Day has lost one: and as "every dog must have his day," it is plain that Mr. *Day* should have his *dog* again.

EXTENT OF THE OREGON TERRITORY.—On the east it skirts 800 miles along the Rocky Mountains, on the south 300 miles along the Snowy Mountains, on the west 700 miles along the Pacific Ocean, on the north 240 miles along the North American possessions of Russia and England. This area of immense valleys contains 360,000 square miles, capable, undoubtedly, of forming seven States as large as New York, or forty States of the dimensions of Massachusetts. Some of the Islands on the coast are very large—sufficient to form a State by themselves.

A new umbrella has been manufactured, called the "lending umbrella." It is made of old newspapers and willow twigs, intended exclusively to accommodate a friend.

A SENSIBLE DOG.—The Boston "Temperance Standard tells the following good 'UN:

"A gentleman residing at Brighton has a Newfoundland dog remarkable for its sagacity. The other day he attempted to catch a couple of mice, which evaded his efforts by creeping into the hay. After repeated disappointments, he was observed to run with great haste into the house, and presently return with the cat in his mouth. He laid her down by the hay, and holding her between his paws, kept her safe until the mice again made their appearance. Their fate was sealed; and the dog seemed greatly satisfied with the success of his scheme." The Standard adds that the statement can be verified if any doubt it.

BURNING WELL.—A correspondent of the Cleveland Plain Dealer gives an account of a burning well that may be seen at Southington Centre, in Trumbull county, Ohio. The well is 91 feet deep, all but 24 through sandstone, quicksand and hard rock, which the auger used for boring cannot penetrate. When it was withdrawn, a peculiar odor, accompanied by a rushing sound, was perceived. Suspecting the presence of inflammable gas, the owner of the well lowered a lamp into it. A violent explosion, that did some injury to the bystanders, was the consequence, and the gas still continues to burn. It is doubtless carburetted hydrogen.

THE LUCIFER MATCH TRADE.—Eight years ago there were only 40 persons engaged in this trade in London, and now there are 25 masters, who make an average of 2,000 gross each wece, or 50,000 gross in all. They employ 350 men and 600 boys. It is snpposed that throughout England there are now employed in this branch, 500 men, 1,200 boys, 11,000 women and girls, using 90,000 square feet of timber per week, and making weekly 100,000 gross, or 14,400,000 boxes, or the enormous quantity of 720,000,000 matches.

SALTPETRE.—The Saltpetre question is at length definitely settled. The AlbanyCitizen says that there is a man in that city whose name is Peter Salte. Peter loves rum better than he loves his wife. The poor woman has forever settled the question which has so annoyingly traubled the New Yorkers. She says Peter came home the other night out of all manner of temper, and almost out of his senses too, and "blew her up sky high" for not cooking the meat he forgot to send home. So the question is set at rest. *Salte Peter* will explode.

"I can marry any girl I please," said a young fellow, boastingly. "Yes, for you can't please any, rejoined a waggish companion.

CATALOGUE OF AMERICAN PATENTS ISSUED IN MAY AND JUNE, 1845.

To James Leffel, of Springfield, O., for improvement in water-wheels—21st May.

To Cheney Snow and Thomas N. Sadler, of Spencer, Mass., for improvement in boot-crimps—21st May.

To Benjamin Haywood, of Pottsville, Penn., for improvement in the coal-breaker—21st May.

To J. De Bretton, senr., of New Orleans, La., for improvement in making sugar—24th May.

To Jacob Alricks, of Wilmiagton, Del., for improvement in the door-latch—24th May.

To Robert Caldwell, of Montevallo, Ala., for improvement in spring saddle—24th May.

To Walter Hunt, of New York, for improvement in inkstands, (having assigned his right, title, and interest in said improvement to Augustus T. Arrowsmith)—29th May.

To Chester Stone, of Rootstown, and George S. Collins, of Ravenna, O., for improvement in self-acting presses for cheese, &c.—29th May.

To Moses Pond, of Boston, Mass., for improvement in cooking-ranges—29th May.

To Arnold Hosmer, of Bath, O., for improvement in hanging carriage-bodies—2d June.

To Wm. Lillie, of Edwards, N. Y., for improvement in double bellows—2d June.

To John Cutts Smith, of Chelsea, Mass., for improvement in portable shower-baths—2d June.

To Joseph Rider, of Wooster, O., for improvement in boot patterns—2d June.

To William C. Grimes, of Philadelphia, Pa., for improvement in spark-arresters—7th June.

To Erastus W. Ellsworth, of East Windsor, Ct., for improvement in instruments for drawing—7th June.

To George W. Billings and John Harrison, of Glasgow, Mo., for improvement in breaking and cleaning hemp—7th June.

To David Bruce, of Williamsburg, N. Y., for improvement in machines for casting types—7th June.

To Horace H. Day, of Jersey City, Henry Geo. Tyler, and John Helm, of New Brunswick, N. J., for improvement in machines for cutting India-rubber into threads—7th June.

To Theodore R. Timby, of Cato-4-Corners, N. Y., for improvemeut in water-wheels—7th June.

To Richard Deering, sen., of Louisville, Ky., for improvement in machines for loosening and separating the boon from the fibre of hemp, &c.—10th June.

To William Wright, of Rochester, N. Y., for improvement in machines for boring circular grooves—10th June.

To Charles Babcock, of East Haddam, Ct., for improvement in coal stoves—10th June.

To Theophilus Smith, of Galway, N. Y., for improvement in cooking-stoves—10th June.

To Joseph D. Briggs, of Saratoga, N. Y., for improvement in corn-shellers—14th June.

To Henry Hizer, of Wooster, O., for improvement in clover-hulling machines—14th June.

To Samuel B. Howd, of Arcadia, N. Y., for improvement in submerged paddle-wheels—14th June.

To Simon W. Draper, of Boston, Mass., for improvement in piano fortes—20th June.

To Sylvanus B. Stilwell, of Brooklyn N. Y., for improvement in cutting garments—20ih June.

To Peter Cooper, of New York, for improvement in the preparation of portable gelatine—20th June.

To James B. Coffin, of Mohicanville, O., for improvement in boring-machines—20th June.

To Thomas H. King, of New York, for improvement in refrigerators—20th June.

To Clark Wheeler, of Little Valley, N. Y., for improvement in bee-hives—20th June.

To Enoch Burt, of Manchester, Ct., for improvement in the stop-apparatus of looms—20th June.

To Jesse Fitzgerald, of New York, for improvements in mills for grinding coffee, &c.—25th June.

To Anson P. Norton and Morris Owen, of Saugerfield, N. Y., for improvement in bark mills—25th June.

To Henry Quin, of New Alexandria, N. J., for improvement in self-setting saw-mills—15th June.

To Erastus C. West. of Bradford, Vt., for improvement in harvest-machines—25th June.

To Richard Deering, sen., of Louisville, Ky., for improvement in preparation of hemp—25th June.

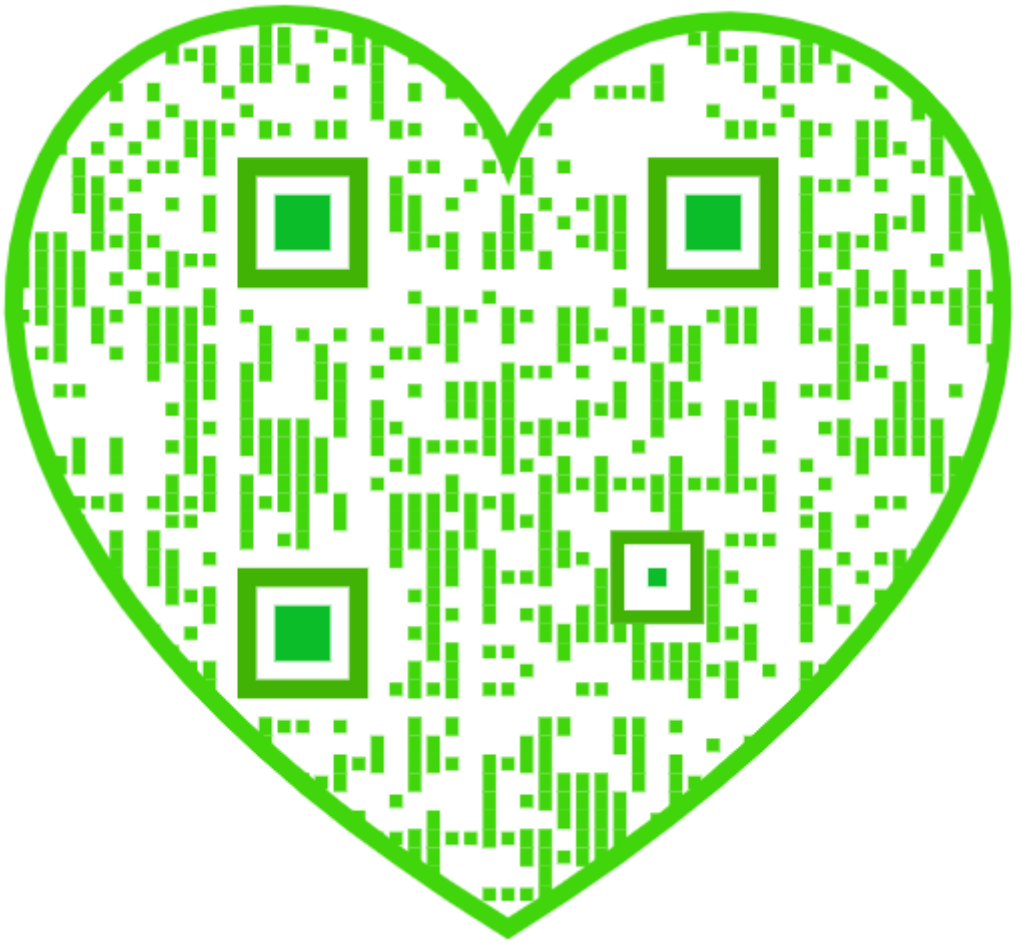
To Thomas H. Barlow, of Lexington Ky for improvement in the process of preparing hemp—25th June.

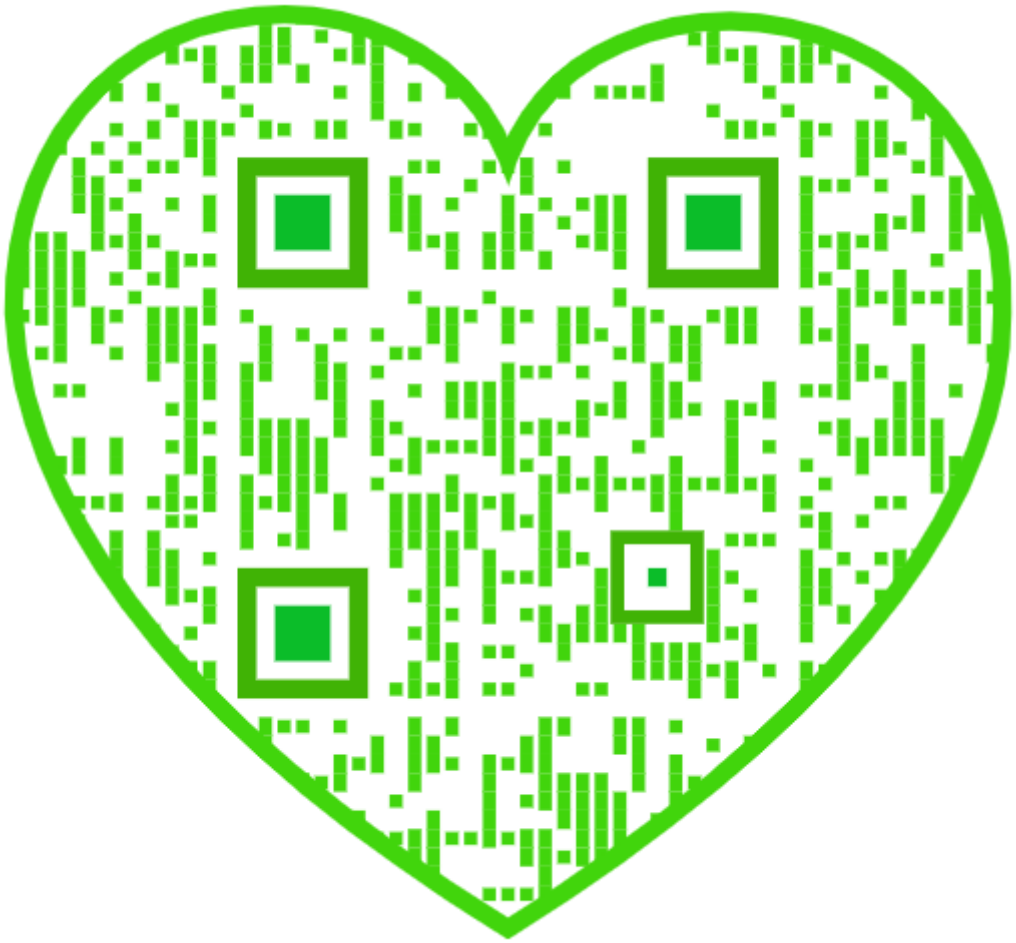
[NOTE.—The cause of the irregularity of our catalogues of patents, may be thus explained: At the commencement of the publication, we received the list for July, from the Patent Office, in manuscript, but through some error or oversight we did not receive the list for August until October, and after we had received that for September. But we procured a paper, containing the lists for May and June, which, with part of the catalogue of last year's patents, we published intermediately.]

PICKING UP A PIN.—Standing in the porch of a noted hotel yesterday, we observed a gentleman pick up a pin and carefully place it on his collar. "That's the way to do it, my boy," said a man from the Western part of this State, who has risen by his own energy from poverty to an income of $40,000 a year; "if your eyes are always as sharp you will rival me in wealth before your hair is grey.

OBEY ORDERS.—The King of the Belgians, during the late fetes, wishing to cross the rue Royale, just before the display of fireworks, had proceeded as far as the Porte de Schaerbeek, when one of the cuirassiers on duty refused to let him go any farther, his orders being strict not to permit any one to pass. The king was, in consequence, obliged to retrace his steps.

© 1845 SCIENTIFIC AMERICAN, INC.





SCIENTIFIC AMERICAN

NEW-YORK, THURSDAY, NOVEMBER 13.

TO OUR PATRONS.

Well, here we are again: and having been so long among the missing, we may be expected to give some explanation of the cause of our long absence. An account of the late fire in Spruce street, will hardly pass for news, having been already published in many papers, and nearly forgotten by the public :—but from the circumstance that several letters have been received, complaining of the non-arrival of our paper, we conclude that there are some people in the world who have not yet heard of our recent misfortunes. We may therefore be excused in giving a brief account of the occurrence. On the evening of Monday, 20th ult., at about 6 o'clock,—our first form being ready for the press,ndmost oaf the type being set up for the second, the cry of fire was heard in the street. This cry had been so frequent that neither alarm nor curiosity was excited, and we should have paid no immediate attention to it, but for a young man who chanced to be present, who opened a window and met a column of hot air and smoke. We then took a momentary survey of the premises to see what articles might be readily prepared for removing, when our clerk stepped into the entry, and meeting a current of hot smoke (for we were on the 2d floor,) and seeing the flames at the door, remarked that we could not be too quick in clearing out. The young man before-mentioned, having gone to the door, enquired for a pail of water, which we handed to him, and which he carried to the street without attempting an application of it. We followed, in order to ascertain the extent of the danger, as did also our clerk, after having deliberately blown out the lamps and *extinguished the snuffs thereof:* butt we found the heat and smoke intense while descending the stairs, and had to rush through brisk flames at the door to gain the street, saving nothing but our mail books and the *pail of water* before-mentioned. In one minute the flames had ascended the stairway to the fourth floor. Some of the hands employed in other parts of the building, ascended to the roof and escaped to the tops of adjoining buildings, and one was compelled to jump from a third story window, but escaped with little injury. In six minutes the flames pervaded every part of the building, and were belching from the windows and roof. The fire originated in the cellar, in which a large quantity of liquors were stored, and in which a man was employed with fire and kettles (a circumstance of which we were not aware,) in the manufacture of spirituous bitters. This unfortunate man was so badly burned, that he soon after died. We had effected no insurance, having but a day or two before perfected the establishment of our printing apparatus, on the premises. Our loss was about $700. We should not have suspended the publication so long, but for the necessity of procuring new engravings for the several heads of the paper, and the illustrations, which required a slow process. We have now a commodious office, in a more pleasant and popular location, than that in Spruce street; and by redoubled diligence and application, on our part, together with the genial influence of our generous friends and patrons, we anticipate a more extensive circulation, and a more valuable establishment within three months, than we should have had if the fire had not occurred: thus will our misfortune be perfectly healed. Now, therefore, friends, do not forget to remember to introduce the subject to your casual associates, and particularly recommend the SCIENTIFIC AMERICAN.

TO OUR GENEROUS COTEMPORARIES.—We can not adequately express our thanks to our brethren of the press, who have—some of them more than once,—volunteered kind and even complimentary notices of our enterprise, giving notice of the interruption of our business, and of our intention to resume. It is impossible for us to reciprocate the favors of all; but this we promise,—that these favors shall be gratefully remembered, when we see an opportunity of aiding by our humble influence, those who may be benefited thereby. We feel the loss of the many friendly editorial notices (which we had carefully endeavoured to preserve) and would respectfully solicit that those editors who have on hand and can spare another copy of such back numbers of their respective papers as contained notices of this, will furnish us with the same. We shall promptly send our papers, with back numbers to those who require them, as soon as we can procure the re-printing thereof.

BACK NUMBERS.—Our new subscribers almost invariably require the numbers from tne commencement: but all our back numbers—of which we had several hundred sets—having been consumed, we must entreat their patience a few days, till we have time to reprint them. Accordingly to present appearances there will be a demand for at least 3000 sets of back numbers, before the completion of this volume; wherefore we can give the fullest assurance that they will be promptly supplied and that without much delay, to those who seasonably order them.

TO CORRESPONDENTS.—We had two or more communications, and a piece of beautiful original poetry in type—and some others on hand, prior to the fire: but those being destroyed, we would solicit from the authors of those contributions, another copy of each of those destroyed: especially that from Washington and the poetry from Hebron, Ct.

A FAVORABLE OMEN.—More that two hundred names have been added to our lists, since our publication was so unceremoniously suspended by the calorine element. If we rightly appreciate the disposition of the generous, patriotic and enterprising classes of working men, we shall see the addition of a thousand more names within one short month.

The art of Painting.

ORNAMENTAL GILDING AND BRONZING.—In ornamental work for carriages, chairs and table covers, gold silver or brass leaf may be applied in the manner described for sign-painting: but in this work, dilute copal varnish may be used for sizing and will dry sufficiently in a few minutes. In ornamental work, the leaf sometimes requires to be shaded in parts, which is done by brushing over it a thin, transparent coat of finely ground umber or burnt *terra de sienna*. A more perfect gold shade, however, is composed of umber and gumboge with a slight tinge of rose-pink. Silver ornaments may be tinged with various colors without losing their metallic lustre. For this purpose, several transparent colors, termed laquers, are used. A gold laquer is made by steeping two parts of turmeric with one part of red saunders in a quantity of shellac varnish—a solution of gum shellac in alcohol. A blue laquer is made by grinding Prussian blue in shellac varnish, working it dilute. For rose color, drop-lake is used in the same manner; and for the best transparent green, crystals of verdigris are used. By the use of these on silver leaf, various colors may be produced with metallic brilliancy: but in all cases, this work must be secured by a coat of copal varnish.

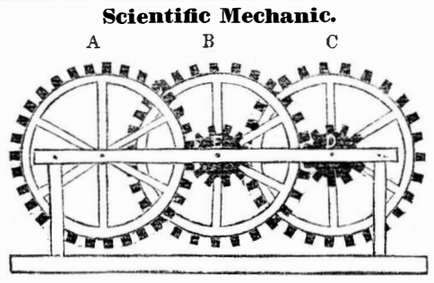
Another mode of producing metallic ornaments, is by means of metallic powder, termed *bronze*. These bronzes, gold, silver, brass or copper, may be readily procured, of various shades and colors, and, gold excepted, at trifling expense. Bronzed figures and ornaments are produced by means of theorems or stencils, consisting of pieces of stiff paper, through which apertures are cut, in the form of the figures intended; and these stencils being placed on the ground intended to receive the figures, the bronze is applied by means of a little ball or roll of buff-leather,—termed a puff—which being dipped in the bronze, is lightly pressed on, or moved over the ground, which appears through the aperture. For example: size the whole ground with a coat of dilute copal varnish, and when it is nearly dry, cut out the form of an oak leaf, from a piece of paper, and place the perforated paper on the sized ground; dip the puff in the bronze, and apply it to the figure, moving the puff from the edges, toward the centre of the figure, applying the bronze principally to the edges; and when the stencil is removed, the bronzed figure will remain conspicuous. Another stencil may be made with the figure of the centre and branches of the same leaf, and being placed on the same place, and tne bronze being applied, the new figure will appear distinctly upon the first, and render it more perfect. In this way, by a variety of stencils to match, and diverse colored bronzes, a variety of beautifully brilliant flowers, landscapes, edifices, &c. may be produced, with but little expense of labor. These figures may be occasionally tinged with laquers, or improved by out lines of opaque paints, and should be secured by a coat of varnish.

VARIOUS CHEMICAL TESTS.—When water is suspected to hold any foreign substance in solution, various means may be used to detect and ascertain the quality of the substance combined; thus, acids may be detected by immersing in the water a slip of litmus colored paper, which, if acid be present, will be changed to red. In the same manner, alkalies may be detected by a strip of turmeric yellow paper, which will be also changed to red by alkalies. These tests are sensible to the presence of an acid or alkali in the proportion of one to ten thousand. Iron may be detected by a drop of infusion of galls, which will give to the water (if iron be present,) a brown tinge. A drop of sulphuric acid, precipitates barites in the form of a white powder. Clear transparent lime-water (water in which lime has been slaked and then suffered to settle) will indicate the presence of carbonic acid by a milky whiteness. On the same principle, a solution of super-carbonate of potass will detect lime. A few drops of nitrate of silver will instantly discover muriatic acid, by a white flakey precipitate. Muriatic acid, consequently, is a good test for silver. Acetate of lead, in solution is a test for sulphuretted hydrogen, which occasions a precipitate of a black colour. Nitrate of mercury is an excellent test for ammonia, one part of which, with 30,000 parts of water is indicated by a blackish yellow tinge on adding the test. Liquid ammonia is a very sensible test for copper, with which it strikes a fine blue color. Nitro-muriate of gold will discover the presence of tin, by a beautiful purple precipitate. Nitro muriate of tin is, on the same principle, an excellent test for gold.

AN EDITOR.—The Sunday Times, speaking of the people employed in a newspaper office says: "The shabbiest looking man among them is the drudge editor; he who writes from three to four colums daily, who must go to every fire for the particulars, feeds modestly at a side table at a public dinner while he makes a brilliant account of the proceedings, preambulates the city at midnight for a true and particular version of the last accident, suicide, or murder; and picks up all the sparkling jokes that season the toast at breakfast, and prevent the coffee from shattering your nerves. The shabby man is put into a little six by twelve room apportioned off from the printing office, by a ricketty partition of pine scantling, and here breathing the vapors of a smoking lamp, he scrawls his articles upon such waste paper as can be purchased for a mere song. The cell contains but an old ink-spotted coverless table and a feeble chair. From such holes emanate all the disquisitions which characterise the independent press of New York.

WORKING ABOUT RIGHT.—The progress of improvement can not fail to equalize the conditions of mankind, whatever its opponents may say to the contrary. The English farmers now complain that they can not hire laborers so cheap as formerly, and the consequence must be a reduction of the rents, while the facilities of carrying their produce to market is still increasing. The rich landlords begin to find themselves more dependent on the laboring classes, than they have been, hitherto, willing to admit.

Scientific Mechanic.



It is on the principle of the lever, and generally the compound lever, that either force or speed are obtained by geer wheels and pinions. Each of the three wheels represented in this cut, is neither more nor less than a circular lever, of which the axis is the fulcrum. If the diameters of the wheels A, B, C, are each four inches, and those of the pinions only one inch, then, the velocity in one, and the force in the other application, is increased four-fold, by each additional wheel. Thus, if one lb. force is applied at the periphery of the wheel C, the pinion D, will exert a force of 4 lb. on the teeth of the wheel B, and consequently the pinion E, will exert a force of 16 lb. on the wheel A. And if we suppose the diameter of the shaft or axle of the wheel A, to be only one-eighth of that of the wheel, it follows that the periphery of the said axle, will be moved with a force equal to 128 lb; and that if one lb. weight were suspended by a cord from the periphery of the wheel C, it would be sufficient to raise 127 lbs. suspended from the periphery of the shaft of the wheel A. On the other hand, if the periphery of this shaft is put in motion with a velocity of one foot per second, then the periphery of the wheel C, would be driven with a velocity of 128 feet per second. The calculations of mechanics with regard to belt-wheels and pulleys, are nearly the same with regard to forces and velocities, as those of geer-wheels. By this, it will be seen that in all mechanical movements, the motion is diminished in proportion as the force is increased; and that force is diminished, as motion or velocity is increased: wherefore it is evident that no actual power (which embraces both force and motion) can possibly be gained by leverage. There is a principle in mechanics, which appears to be nearly allied to the foregoing, with regard to motion, and which proves to be very difficult to be understood, but which we shall endeavor to explain, although it appears to many mechanics a complete paradox.

It has been demonstrated above, that if a geer-wheel is made to work into a pinion, the diameter of which is equal to one-fourth of that of the wheel, the pinion must revolve four times to each revolution of the wheel: and that if another wheel of equal size be mounted on the pinion shaft, and power be applied to the first wheel, the second wheel will move with a force equal to one-fourth of that applied to the first wheel; or that to produce motion with a given force, in the second wheel, four times as much force will be required to be applied to the first; or that to produce and maintain motion in the second wheel, under a given resistance,—such as the raising of a pendant weight for instance,—requires four times as much power to be applied to this wheel, as would be required to overcome an equal resistance in the first. From this, people are apt to infer, that to produce a quadruple velocity in the second wheel, requires no more than quadruple the power that is required to produce motion on the firsl. The fact is far otherwise; for no less than sixteen times as much power is required, to overcome the inertia of the second wheel, so as to produce quadruple volocity, as is required to give the first wheel its relative motion; and to produce four revolutions of the second wheel, in a given time, sixteen times as much force is required to be applied to the first wheel, as that required to produce one revolution in the same time ih the first. For in all cases, a four-fold power is required, to produce a double velocity, and in this instance the power is applied under a disadvantage of leverage, of four to one.

(To be continued.)

U. S. OVERLAND MAIL TO CHINA.—Proposals have recently been made to the Post Master General, for transporting the mail, monthly, to Oregon, and it is now proposed to connect therewith a line of steamers from thence to China, by means of which, a communication direct between the Atlantic cities and China, could be effected nearly a month earlier, than that by way of Europe and the Asiatic overland route. We doubt whether the enterprise will be carried forward, however, unless Mr. Whitney succeeds in his project for a railroad from the Mississippi to Oregon, in which case the trip from New York to China would be performed in about sixty-five days, instead of 100 days which is required by the eastern routes. If the progress of enterprise and improvement continues a few years longer, we may expect that a trip "round the world," will be considered an ordinary fashionable tour.

THE MORMONS.—From recent accounts it appears evident that the Mormons are not only determined on removing to California in the Spring, but that they have anticipated this move for some time past, and have had emissaries employed in exploring that country, and have got the locations of their cities already decided on. General Bennet has joined them at Nauvoo, and offers to furnish six pieces of brass artillery at his own expense, and to head the grand army in its psssage over the Rocky Mountains, to raise the standard of the Saints permanently on the flowery banks of the Pacific. Orson Hyde, one of the twelve apostles, is said to have passed through Cincinnati recently, on his way home, with $1,500 worth of tent-cloth for the use of the caravan on its journey. They will, of course, recover pay for their property destroyed, and probably make an excellent bargain of it.

AMERICAN HEMP.—This article is now exported to Scotland, where it is used instead of flax in the manufacture of certain kinds of goods, and where a new process has been discovered for softening the article prior to its being spun. Very fine and white goods are made of it, as well as bonnets and paper

Curious Arts.

COPPER-PLATE ENGRAVING.—for this purpose, provide a plate of copper, rather larger than the design that is to be engraved, and may be about one-sixteenth of an inch thick; planish by rubbing it, first, directly length-wise, and afterwards breadthwise with a piece of pumice-stone, which may be dipped occasionally in a mixture of one part nitric acid, with six or seven parts water. Then wash the copper with clear water, and rub it with an oil stone that has a plane surface; and then polish it with a piece of charcoal, that has been ignited to redness and quenched in cold water. Afterwards burnish the copper by rubbing it with polished steel. Lay a piece of transparent paper on the design that is to be engraved, and trace the principal lines with a lead pencil;—then brush over the copy or tracing with dry red ochre, and having rubbed the copper-plate with a piece of bees-wax, lay the red side of the tracing on the plate; then, with a smooth iron point, trace the same lines again, that they may thus be transferred to the plate by means of the red ochre and wax. Take up the paper and trace the lines on the plate with a needle, thus scoring the lines slightly on the copper. Then warm the plate and wipe off the wax, or wash it off with spirits of turpentine, and rub the plate with fine dry whiting.

The next instrument to proceed with is the graver; consisting of a blade of steel about three inches long, which is fixed in a convenient handle like an awl. The form of the graver should be triangular, or between a triangle and lozenge, having two sides plane and the other round or swelled; and should taper regularly from the handle to the point, or nearly so, but the point must be ground off obliquely so that the edge may extend a little further than the back; and the edge should rise a little rounding towards the point. It is very essential that the edge and point of the graver should be kept very sharp. The manner of holding the graver, is to take the handle into the hollow of the hand, pressing it with three fingers on one side, and the thumb on the other, and extend the fore finger on the back of the blade towards the point. The edge of the graver must rest on the plate, and its motion when cutting must be endwise in all cases; though there evidently might be a graver constructed, which might, in some cases, be handled in a manner more similar to that of a pen or pencil. A graver of a square form may also be requisite, for cutting large and broad lines occasionally. In proceeding to engrave the plate, begin with the outlines, observing to press harder or lighter on the graver, as the lines require to be larger or smaller and finish each line with the same motion if possible, without taking the graver off the plate. Having cut the outlines, proceed to fill up, and shade the work discretionally, according to the design. It may be requisite, after part of the work is engraved, to scrape it lightly with the edge of the graver, to take off any roughness that may have been formed on the part engraved. If, after finishing the design, any part appears to have been improperly executed, such parts may be erased by the burnisher, and may be re-engraved with the requisite amendments.

BEST METHOD OF TRACING OR COPYING A PICTURE.—Perhaps the most simple method of copying the outlines of a picture, is to place the picture against a window, with the paper over it, on which the copy is to be drawn; the principal lines of the picture will be seen through the other paper, and may readily be traced with a lead pencil. But the usual manner of copying in landscape painting, and which will answer for pictures of any size, is to rub over the back of the picture with plumbago, or red ochre then lay the picture on the ground that is to receive the copy, and trace the lines with a smooth pointed steel, or piece of hard wood. The ground will thus be very accurately and distinctly marked, by the plumbago or ochre adhering to the ground in the lines that are traced. When several copies are to be taken from the same pattern, (which frequently occurs in ornamental painting,) the ontlines of the first copy may be perforated with some pointed instrument, so that being laid on the other grounds that are to receive the copies, and brushed over with a little fine dry whiting, or red ochre, (as the case may require) the whiting or ochre will penetrate the perforated lines of the pattern, and thus mark the ground on which it is laid.

GAINING TIME.—It has been before-mentioned, that a telegraphic commnnication in a westerly direction, would go ahead of the sun, and arrive at the Mississippi nearly an hour earlier in the day, than the time of its starting in this longitude. In view of this fact, a correspondent wants to know whether, if a line were extended round the globe, the communicated intelligence would not arrive at the starting point on the day prior to the time of its commencement? We shall leave the query for others to answer.

PERPETUAL MOTION.—The Portland Argus has a long article about a "perpetual motion," invented by an ingenious mechanic of Livermore, Me. If we mistake not, this same "motion" was advertised to be exhibited in this city a few months ago. Mr. Porter, a scientific mechanic, offered the inventor five dollars for the privilege of taking out one of the screws, when the latter took the alarm, and "mizzled" with his invention. It is, probably, an ingenious hnmbug.—*Boston Mail.*

Rather more than probable, friend Purdy; and if another similar exhibition is offered in Boston, please inform us, and we shall comes to see it forthwith.—[ED. SCI. AM.

AN ARCHITECTURAL CURIOSITY.—A Dr. Crosby is bnilding a dwelling house, on the hill east of the college at Hanover, N. H., on a very unique plan. It is an octagon, of eight equal sides, built of rough fragments of stone, and every room is a triangle. It may prove a very convenient house nevertheless.

NEW ENTERPRISE.—A steamboat called the Lama has arrived at Pensacola from Geneva, Ala., going by way of the Chocktahatchee river, and being the first attempt ever made to navigate that stream by steam.

VARIETY

During a recent fire in Eastport, Me., the firemen got out several casks from the burning store, and rolled them up the hill: but on discovering that they were filled with ardents, they let them roll down the bank into the river.

Several specimens of iron furniture were exhibited at the recent Fair, among which were some elegant chairs with stuffed cushions. An Irishman remarked that "all the *wood work* about them, was made of iron."

It is computed that 515,900,000 bushels of grain, 15,000,000 bushels of potatoes and 81,000,000 lbs. of rice have been raised in the United States the past season. Those who have got money need not starve.

One of the Essex street merchants, in Salem, Mass., advertises ladies' merino vests and pants. One of the Salem editors appears to be much alarmed on the occasion.

Money is said to be extremely scarce in North Carolina, and the country people are constrained to carry small quantities of tar and rosin to exchange for commodities at the stores.

When a corpse is carried through the streets of Paris, every person from the king to the scavenger, who meets it, takes off his hat, and keeps it off till the hearse has passed by.

We learn from the 'Sun,' that two dogs are *drawing immense houses*, at the Bowery Theatre. They must be immensely smart dogs on the draught.

The Albany Argus says, "The *railways* between here and Buffalo, will not average more than 16 miles an hour." It does not say how fast the *cars* may travel.

The product of the Russian mines last year was 9000 pounds of fine gold, valued at 600,000,000 frs., or about $120,000,000; also 2,000 pounds of platina, valued at $23,000,000.

Norris, of Philadelphia, has sent two more of his splendid locomotives to Russia, to supply one of the numerous orders he has lately received from that country.

The valuable cement used in the south of France for grafting trees. is said to be made of equal parts of train oil and rosin melted together, and applied to grafts with a painter's brush.

The Post Master General has decided that newspapers and pamphlets may be carried out of the mail, by mail contractors, within thirty miles of the place of publication.

A certain poet sings of "the dark eyed maiden of the South." The New London Advocate suggests that "the farther south he goes the more numerous the dark-IES become."

The Hingham Patriot says that the chesnut engrafted upon oak, has been proved by experiment to be much more productive than on its natural stock.

The "big squash of the season" was raised by Mr. J. Andrews of New Boston, N. H., and measured five feet in circumference, and weighed 93 pounds.

'Hurrah for Cash Clay, we'll soon be free,' is the first line of a song sung by some of the negroes in Kentucky. Massa will turn the tune when *he* hears it.

The shares in the Cunard Boston Steamers, which originally cost £1,000, are now selling in England for £2,500, thus proving the enterprise highly successful.

Twenty thousand bushels of potatoes had been brought to Boston on the western railroad this season, prior to some time ago.

Reports by the latest arrivals from Europe, say that "*bread-stuffs were still rising in the East.*" Our city bakers could make similar reports any day.

Price, the ex-postmaster of Hamburg, N. Y., has been sentenced to ten years' imprisonment, for purloining money from letters arriving or departing at his office.

A little girl hearing it remarked that all people had once been children, artlessly inquired, who took care of the babies?

A successful experiment has been made in raising sweet potatoes in Wisconsin; and a quantity grown there have been sold for $2 per bbl.

A cathedral is in progress of building in Montreal, which contains 1,363 pews; will accommodate 15,000 persons, and will have cost $600,000.

There is now growing on the top of Porthkerry church steeple, in Wales, an apple-tree which has borne about eighty apples the past season.

Simmons, at Oak Hall, Boston, pays the Boston Atlas sixty dollars a year for advertising. It is no wonder he drives a flourishing trade.

Several silk raisers from the North and East have gone to Virginia, for the purpose of establishing the silk business on that favorable soil and climate.

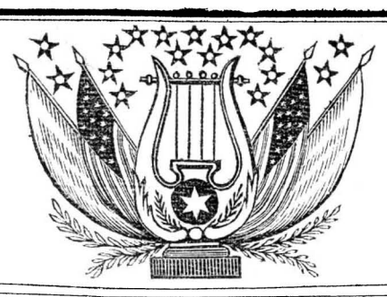
There are eight silk factories established in the town of Mansfield, Conn., and the business is said to be constantly increasing.

An Eastern paper states that there is a man living on Cape Cod, who has drank 91,980 glasses o rum within thirty-six years, and isn't satisfied yet.

A boy only thirteen years old is officiating as a regular Methodist clergyman, in Liverpool, Eng. He preaches extempore, and is highly spoken of.

At a recent ball in Havana, the wife of the ex-President of Mexico wore upon her person $50,000 worth of diamonds.

© 1845 SCIENTIFIC AMERICAN, INC.



Autumn Song.

The gold corn in the field
And the asters in the meadow,
And the heavy clouds that yield
To the hill a crown of shadow,
Mark the ending of the Summer,
And the Autumn coming in,
A crimson eyed new comer,
Whose voice is cold and thin,
As he whispers to the flowers,
"Lo all this time is our's."

I remember long ago
When the soft June days were wasted,
That the autumn and the snow
In the after heats were tasted;
For the sultry August weather
Burned the freshness from the trees,—
And the woods and I, together,
Mourned the winter, that must freeze
The silver-singing streams
Which feed our summer dreams.

Through the yellow afternoon
Rolls the wagon harvest-laden,—
And beneath the harvest moon
At the huskings sings the maiden;
While without the winds are flowing
Like long aerial waves,
And their scythe-sharp breath is moving
The flowers upon the graves.
When the husking is all o'er
The maiden sings no more.

Winter is Coming.

"Winter is coming! who cares? who cares?"
Not the wealthy and proud, I trow;
"Let it come!" they cry; "what matters to us
How chilly the blast may blow?"

"We'll feast and carouse in our lordly halls,
The goblet of wine we'll drain;
We'll mock at the wind with shouts of mirth,
And music's echoing strain.

"Little care we for the biting frost,
While the fire gives forth its blaze,
What to us is the dreary night,
While we dance in the waxlight's rays."

'Tis thus the rich of the land will talk;
But think! oh, ye pompous great,
That the harrowing storm YE laugh at within,
Falls bleak on the poor at your gate?

They have blood in their veins, aye, pure as thine
But naught to quicken its flow,
They have limbs that feel the whistling gale,
And shrink from the driving snow.

Winter is coming—oh! think ye great,
On the roofless, naked and old;
Deal with them kindly, as man with man,
And spare them a tithe of your gold.

The Newspaper.

Lo where it comes before the cheerful fire,
Damp from the press in smoky curl aspire;
(As from the earth the sun exhales the dew,)
Ere we can read the wonders that ensue;
Then eager every eye surveys the part,
That brings its favorite subject to the heart;
Grave politicians look for facts alone,
And gravely add conjecture of their own;
The sprightly nymph, who never broke her rest,
For tottering crowns, or mighty land's oppress'd,
Finds broils and battles, but neglects them all
For songs, and suits a birth-day or a ball;
The keen, warm man o'erlooks each idle tale,
For "Money's Wanted," and "Estate on Sale,"
While some with equal minds to all attend,
Pleased with each part, and grieved to find an end.
To this all readers turn, and they can look
Pleased on a paper, who abhor a book;
Those who ne'er deigned their Bible to peruse,
Would think it hard to be denied the news,
Sinners and saints, the wisest and the weak,
Here mingled tastes, and one amusement seek;
This like the public inn, provides a treat,
Where each promiscuous guest sits down to eat,
And such this mental food as we may call,
Something to all men, and to some men all.

A CURIOUS NOTICE.—The following is from a country paper, and is not only good sense, but out of all measure, comical poetry:—

He who reads and comes to pay,
Shall read again another day—
But he who will not "plank the cash,"
Must have his name erased by a —— (dash.)

WAKE UPON WAKE.—An Irishman named Haley became so far intoxicated while attending the ceremonial of *waking* a deceased acquaintance, a few days since, that he fell down the back stoop and broke his neck. Whether any other followed the example at *his waking*, we have not learned.

BRIGHT——a lady went to a police office to inquire for a lost cloak. A justice, fond of a joke, said: 'Madam, we do nothing under a cloak here.' 'I beg pardon,' rejoined the lady, 'I thought this was the *pelisse* office.'

DISASTROUS EFFECT OF ADVERTISING.—A western paper, speaking of one of its patrons, says,—"Since Mr. Berien commenced advertising in the Republican, he has been so jammed with customs, that he frequently forgets himself, and sells many articles below cost, and must consequently be losing money very fast.

CORNED.—"What's the matter," said a Boston man to a friend, who was walking rather crookedly; "are you corned?" "Not exactly," replied the other, "but my toes are." He probably did no belong to the *washing-toe*-nian society.

A specimen of copper ore, almost pure and weighing 1600 lbs., has been found on the shore of Lake Superior, and forwarded to New Haven, Conn.

Interesting Experiments.

TO MAKE A WRITING VANISH AND ANOTHER APPEAR IN ITS PLACE.—Write on paper with a solution of sub-carbonate of potass,—the writing will be invisible. Mix together equal parts of solution of sulphate of iron, and infusion of galls; write with this mixture (which is black,) on the same paper, then add to the black liquor a little sulphuric acid sufficient to deprive it of color. Wet the paper with this compound; and the acid will discharge the color from the last writing while the alkali of the first, will precipitate the gallate of iron, and the writing will become black.

SUNDRY EXPERIMENTS.—Moisten the under lip, and lay upon it a piece of silver money, (not less than a twenty cent piece) with the edge of it beneath the tongue; lay a piece of zinc, of nearly an equal size, upon the tongue, and bring the edges of the pieces of metal into contact; you will instantly drop the money.

Fill a glass with water, and lay a piece of paper upon the top of it; place your hand upon the paper, and invert the glass; the hand may be removed and the glass may be suspended in that position by a thread, and the water will not be spilled.

Fill a flask nearly half full of water, and apply heat till it boils; take it from the fire, and, when it has done boiling, cork it; pour cold water upon the flask, and the water inside will re-commence boiling.

Write with diluted sulphuric acid, on paper that has been colored brown by a mixture of sulphate of iron, and infusion of galls; the writing will be white.

Drop a piece of phosphoret of lime, into a glass of warm water; bubbles will soon rise, and on reaching the surface of the waters will spontaneously explode.

THANKSGIVING.—The appointment of thanksgiving days by the Governors of the several States, appears to be more in fashion this year, than for many years, if ever, before. The day appointed to be observed for this purpose, in South Carolina, was Thursday the 6th inst. The Governors of Ohio and Kentucky, have appointed the 20th Nov. In Massachusetts, Connecticut, New Hampshire, Pennsylvania, and Maryland, Nov. 27 is appointed; and in Maine, Vermont, and New York, Dec; 4th. It has been proposed and recommended by some, to have the annual day of thanksgiving appointed by the General Government, that it may be observed in all the States on the same day: but this plan would evidently be opposed by the fiddlers, as they would thus be deprived of the privilege of playidg for the thanksgiving balls in different States, as usual, in the same year.

TAPPING THE LINE.—It will be remembered that when the steamer Great Britain arrived on our coast, she put into Holmes' Hole for fuel, and her most important news escaped on shore and was published in Boston before the vessel arrived in New York. Consequently some of our citizens complain that the Bostonians, not content with their Cunard line of steamers, have the impudence to *tap* the New York line, as the vessels pass, and get out the news before it is received here. Too bad, truly.

THE PROUD AND DIGNIFIED CHURCHES.—The Lowell Vox Populi, says that so expensive has the observance of the church service in accordance with the *fashion* become, that many of the working people now abstain from them, and hold Sunday meetings at the Mechanics' Reading Room, the services of which consist in reading the Scriptures, singing hymns and speaking upon topics affecting the rights of the laborer.

A COINCIDENCE.—Thomas D. Potter, of Concord, N. H., fell from a chesnut tree, a few days since, a distance of thirty-four feet, without sustaining any material injury. But what renders the circumstance the more remarkable, is the fact that twenty-four years ago, the same person fell the same distance, from the same tree, breaking an arm and sustaining other injuries. Thomas evidently improves by practice.

REFUSING THE SERVICE.—The editors and publishers of several newspapers have promptly refused to advertise for grocers or innkeepers who deal in ardent liquors. That is as it should be; and it is to be hoped that all editors, especially those who advocate the temperance cause, will be consistent enough to refrain from aiding the rum trade, by either advertising or puffing any thing in the line.

INDIAN NAMES.—The names of many of the women of the Seneca tribe, are selected with excellent taste, and are beautifully expressive of sentiment, which would not dishonor a more refined race. The following for instance:—Rose-on-the-bush, Soft-air, Welcome-home, Summer-bud, Bird-at-night, Sweet valley-bush, Wind-on-wings, Shining-Star, Young-fawn, Lark-in-the-morning, Maple-bud, &c.

EDITORS LOOKING UP.—Mr. Norris, editor of the Boston Olive Branch, has had his pocket picked to the tune of $50 cash, besides valuable papers. Who ever heard of such a thing happening to an editor?

IMPROVEMENT ON LAKE SUPERIOR.—In 1842 there were only two vessels on this lake, and they were not fully employed. There are now eight, and several more are in progress and will be put in service in the spring. The number will probably be doubled in another year.

CHEAP ENOUGH.—The editor of the Chicago Journal, who has been travelling through several counties in Illinois, says that any quantity of corn could be obtained for five or six cents per bushel.

A single sheet of paper has been manufactured bp M. M. Hudson, of Hartford Ct., which measures 25 feet in length and 9 feet in width, and cost $25.

A company of traders have left St. Louis for the purpose of establishing a half-way-house to Oregon They are fully prepared to defend any position they may choose to occupy.

New Inventions.

A new machine has been invented in Providence, R. I., for washing colored prints. It consists, in part, of three cylinders, two of which are on the same level, and the other is placed below, and under water. The pieces of cloth being sewed together, pass under the one in the water, and then upward between the two above, which, being in contact, press out the water. By passing through several sets of these cylinders in succession, the cloth becomes thoroughly cleansed.

IMPROVED LOCOMOTIVES.—A new engine has been constructed for the Liverpool and Manchester Railway, containing a double fire-box, so arranged that by the admission of fresh air into the second box or section, while the smoke and gasses are passing through, an extra combustion is produced, and a much larger quantity of heat is produced from the same fuel. Another engine has been constructed by Mr. Brunnel, an English engineer, which has eight driving wheels, and is calculated to run fifty miles per hour.

IMPROVED CLOCK.--A watchmaker of Philadelphia has recently invented a clock, the motive power of which is the dropping of water. The invention is favorably spoken of, in some of the papers, but we have not learned by what method it is to be secured against frost. Alcohol may be substituted, but would probably waste by evaporation.

A new Reaping Machine has been invented by a Jerseyman, Ferdinand Woodward, of Cream Ridge, Monmouth Co., by means of which, according to a note in the State Gazette, two horses and two men may cut and deposit in sheaf about thirty acres of wheat, rye, oats or rice, in one day.

ANOTHER PROPELLER.—The Pittsburg 'Iron City' speaks of an improved submerged propeller; but was restricted from giving a description under the ordinary frivolous plea that *the patent had not been secured*. This is probably the last we shall hear of it.

A MINE OF DIAMONDS.—The French Consul at Bahia has addressed a report to the Minister of Foreign Affairs at home, announcing the discovery of an abundant mine of diamonds, which is becoming a source of immense wealth to that province. It lies in a desert, and is scarcely accessible, about 250 miles from that capital. A few Englishmen at the place have already secured and imported £200,000 worth of its produce, and as the working of the mine is let to any one who applies, there is a rush from all parts of Brazil, to secure a share of the treasure. If the discovery should have the effect to prostrate the value of the extravagantly expensive baubles worn by the nabobs and nabobesses, or reduce the cost of the glaziers' cutting diamonds, it may be of some use to the world.

FRESHET IN MAINE.—The Kennebec river has been swelled to an almost unprecedented extent, within a few days, and many bridges, mills and other buildings have been swept away or seriously damaged. Several vessels at Augusta, floated into the streets, and were moored to the most firmly built houses. Immense quantities of wood and lumber has floated off, and the goods in the stores and cellars much injured. The water was receding, and the new "Kennebec Dam" remained firm at the last accounts.

AMERICAN BEAUTY.—The editor of the Courier des Etats Unis, a French gentleman, now in Paris, admits the superior beauty of the American women over that of the Parisian ladies; and thinks that what is considered *passably handsome* here, would be deemed first rate beauty in the metropolis.

HARD TO COMPREHEND.—An exchange paper, speaking of the relative expense of wear of iron rails, after having specified the cost, and time, and service, concludes that the company receive about *five per cent. per mile per ton per annum*, for all the freight they carry. We can't see through it.

PICKING POCKETS.—We have daily reports of pocket books lost, with sums of money, &c. We have said before, that if those who have money have not wisdom enough to make a better use than that of enriching the scoundrel pickpockets, they may as well go without money. They are hardly entitled to sympathy.

A SUPERB ORGAN.—We last evening listened to the notes of an organ of improved construction, and far superior to any which we had before seen. It has been constructed by Mr. Robjohn, of this city, at a cost of $4,000. We shall give a description in No. 10.

SHEEP AND WOOL.—Spain has 20,000,000 sheep the wool being worth 94,000,000 fr.; France has 32,500,000, the wool and flesh worth 129,000,000 fr.; Great Britain has 35,000,000, wool worth $14,000,000; the United States has 34,000,000, wool worth $12,000,000.

CHEMISTRY AND MAGNETISM.—In consideration of the accumulation of new items, during the suspension of our publication, and the loss of our prepared papers on those subjects, our readers will excuse the omission of the essays on those subjects, in this number. They will appear in our next.

REMORSE.—It is reported that Elliot, who killed young Kendall in a duel a few weeks since, is nearly tracted, and serious apprehensions are entertained of his becoming totally insane.

A LOWELL PEAR.—Mr. J. G. Locke, of Lowell, has raised a pear which measures twelve inches in circumference. We should like to pare a pair of such pears.

THE ART OF SHOPPING.—"What's the price of this article?" inquired a deaf old lady.

"Seven shillings," said the draper. "Seventeen shillings!" she exclaimed: "I'll give you thirteen." "*Seven* shillings," replied the honest tradesman, "is the price of the article." "Oh! seven shillings!" the old lady sharply replied; "I'll give you *five*."

Railroad Intelligence.

[The crowded state of our columns this week, will compel us to present the recent intelligence on this subject in brief items: and we shall not be particular about classsfication]—

The Old Colony Railroad, from Boston to Plymouth, is so far completed that the cars have commenced running.

The rails are being laid between Springfield and Northampton, Mass., and the road will soon be completed.

The Harrisburg Railroad Company have decided on laying the heavy H rail on that road, instead of the flat rail hitherto employed.

The Boston and Albany Railroad is doing a smart business. On Saturday week 177 cars, loaded with 875 tons of merchandise, including 5000 barrels of flour, left the Greenbush depot for Boston.

The Vermont Central Railroad, from Keene, N. H.. through Windsor and Royalton, Vt., is located and partly under contract.

A dividend of three per cent. on the stock of the Baltimore and Ohio R.R. having been declared, the stock has taken a decided upward movement.

A Railroad is now in operation from Cincinnati to Xenia, O., and the project is actively pressed for the construction of a continuous road from Xenia, via Columbus, and Cleveland, to meet the New York and Erie R. R. at Dunkirk: thus effecting a direct railroad route between New York and Cincinnati. The whole distance by this route is 879 miles.

The railroad route from Concord N. H., to Portsmouth is being surveyed, and will soon be put under contract.

The Saratoga and Washington road, from Troy to Lake Champlain, will be speedily completed.

Railroads are projected, and movements are in progress for the location thereof, from Cleveland to Pittsburg: from Lexington, Ky., to Maysville: Lexington to Louisville, and to Cincinnati: Cincinnati to Pittsburg: Newburyport, Mass., to Lowell: Framingham, Mass., to Waltham. Also a grand project for a railroad from Quebec, Can., to Halifax, N. S., a distance of 600 miles. The prospect is, that the knights of the pick and shovel, will find business in this country for some time to come.

ANOTHER USE OF THE MAGNETIC TELEGRAPH.—It is well known that northeast storms invariably commenco several hours earlier at Baltimore than at New York, and still later at Boston. It is now suggested that notice may be given of the approach of a storm, from station to station, and thus prevent the loss or damage of many vessels and other property, by giving the owners an opportunity to provide for the safety thereof. Even the farmer may be notified a day beforehand of the approach of a storm, and thus avoid many losses of hay and grain.

THE RECENT EARTHQUAKE.—Every body has heard, or heard of, the earthquake which was sensibly fels in this State, and more so in Connecticut, a few days ago;—wherefore, we shall not give any description, farther than to mention the incidents that at Greenfield hill, milk pans were thrown down: at Huntington, the books of a clergyman were thrown off the table:—and that in the latter place, many of the springs and wells suddenly become dry, and remained so for an hour or more. It is supposed that a great earthquake occurred at the time in some distant part of the world of which we may soon expect to hear.

PACIFIC.—It is reported that President Polk has written a very conciliatory letter to the President of Mexico, and that a new Mexican Minister is appointed. This is the course of true wisdom; for however easily we might defeat the Mexican forces, yet the expenses of military movements are so great, that a mere trivial war would cost the country more than the entire value of Texas, with all its improvements.

ADROIT SWINDLING.—A stranger lately obtained from a merchant in Cincinnati, an advance of a hundred dollars, on what purported to be a cask of extra brandy; but it was subsequently discovered that the cask contained only a gallon of brandy, in a small vessel, fitted inside and around the bung hole, and all beside was water. We think the device was excellent; and that all the imported liquor casks ought to be fitted up in the same way.

ODD FELLOW INSURANCE.—The losses sustained by the Odd Fellows in the conflagration of Pittsburg, amounting to $15,000 have been made up to them by the voluntary subscriptions of their brethren in other parts of the Union. If this principle is followed up, the members of the order will have occasion for no other insurance on their property in any case.

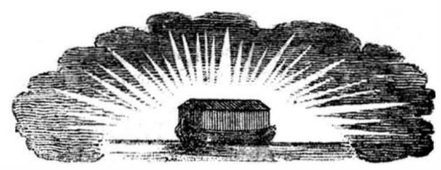
FACILITATION IN TANNING.—The editor of the Danvers, (Mass.) Courier has been shown a pair of boots, the upper leather of which was a raw hide only two weeks before; having been tanned, curried and made up in that brief space of time.

LITHOGRAPHIC STONE.—This article, now so indispensable and extensively used, has been found heretofore only at Solenhofen, on the Danube. But during a recent geological survey of Canada, a large quantity of this stone, of excellent quality has been discovered at a place called Rama, on Lake Simcoe. It will, of course, prove a valuable acquisition to the arts in America.

A COMICAL ERROR.—At the time of the recent election in Philadelphia, one of the papers devoted to the Native American party, urged the voters of the party to vote the *whig ticket:*—the types having taken it into their heads to print *whig* ticket, instead of *whole* ticket, as was intended.

A READING COMMUNITY.—There are seventy book stores and periodical establishments in Boston, and forty-five daily and weekly newspapers.

BURNING STRAW.—A man named Jackson Straw, was bodily burned a few days since, by the premature explosion of gunpowder, while employed in blasting rocks, in Gloucester, Mass.



God seen in all His works.

In that beautiful part of Germany which borders on the Rhine, there is a noble castle which as you travel on the western bank of the river, you may see lifting its ancient towers on the opposite side, above the groves of trees about as old as itself.

About forty years ago, there lived in that castle a noble gentleman, whom we shall call Baron ——. He had only one son, who was not only a comfort to his father, but a blessing to all who lived on his father's land.

It happened on a certain occasion that this young man being from home, there came a French gentleman to see the castle, who began to talk of his heavenly Father in terms that chilled the old man's blood; on which the Baron reproved him, saying "are you not afraid of offending God, who reigns above, by speaking in such a manner? The gentleman said he knew nothing about God, for he had never seen him.

The Baron this time did not notice what the gentleman said, but the next morning took him about his castle grounds, and took occasion first to show him a very beautiful picture that hung on the wall. The gentleman admired the picture very much, and said "whoever drew this picture knows very well how to use the pencil."

"My son drew the picture," said the Baron.

"Then your son is a clever man," replied the gentleman. The Baron then went with his visiter inth the garden, and showed him many beautiful flowers and plantations of forest trees. "Who has the ordering of this garden?" asked the gentleman.

"My son," replied the Baron; "he knows every plant, I may sav, from the cedar of Lebanon to the hyssop on the wall."

"Indeed," said the gentleman, "I shall think very highly of him soon." The Baron then took him into the village and showed him a small neat cottage. where his son had established a school, and where he caused all young children who had lost their parents to be received and nourished at his own expense. The children in the house looked so innocent and so happy, that the gentleman was very much pleased, and when he returned to the castle he said to the Baron, "what a happy man man you are to have so good a son!"

"How do you know I have so good a son?"

"Because I have seen his works, and I know that he must be good and clever, if he has done all you showed me."

"But you have not seen him."

"No, but I know him very well, because I judge of him by his works."

"True," replied the Baron, "and in this way I judge of the character of our heavehly Father. I know by his works, that he is a being of infinite wisdom, and power and goodness."

The Frenchman felt the force of the reproof, and was careful not to offehd the good Baron any more by his remarks.

RELIGIOUS INSTRUCTION OF SLAVES.—It appears from the interesting Report of a Methodist Convention recently held in Charleston, S.C., that, besides the attention paid by traveling and local preachers to the negroes in their regular ministrations, there are between 80 and 90 missionaries to them, who have under their charge over eighteen thousand church members, and 100,000 attendants on their services. Over 1000 negroes are in connexion with the Methodist Church in Texas. The South Carolina Conference has sixteen missions to the negroes; the Georgia Conference, twelve: Tennessee, five; Alabama, seven; Memphis, nine; Arkansas, one; Mississippi, seven; North Carolina, two; Virginia, two. The catechising of the children and youth is a prominent part of their labor.

The Magnetic Telegraph.

The line of telegraph between Albany and Buffalo, is in progress, and will be soon completed; it is already in operation most of the distance. The line from New York to Pittsburg is expected to be completed early in January. Permission has been obtained to erect posts for the wires in the streets of Philadelphia and Baltimore, and the line between those cities and New York will be completed without delay. The price of communication between New York and Philadelphia, is fixed at 25 cents for every ten words;—every numeral being counted as a word. The marine line from this city to Long Ialand, extends across the East River; the wires being enclosed in a heavy leaden pipe. This pipe with the wire has been once broken, by being hauled up on the fluke of a ship's anchor; but has been again replaced. We shall propose a plan—probably in our next—for carrying the wires over rivers at such an elevation as to be safely above the masts of vessels.

THE STEAMER GREAT BRITAIN.—We had an article tn type on the subject of the arrival of this vessel, when our office was consumed. We shall now simply remark that the Great Britain has arrived since our last number, (after a long and tedious passage,) and has gone again. As we predicted, her propeller does not answer the expectations of her proprietors, and it is determined to make some alteration in her propelling apparatus and may possibly substitute paddle wheels—before she revisits this port. We have said before, and now repeat, what every engineer ought to know, that not more than one half of the power of a steam engine can possibly be applied to the propulsion of any vessel, by any model of the screw propellers.

REVERSE OF FORTUNE.—One of the inmates of the Bellevue Almshouse, is pointed out by those who know him, as one who, a few years ago, strutted Broadway, the paragon of fashion, and the envied recipient of smiles and bows from all the promenaders of that thoroughfare. This is not a solitary instance of the kind.

© 1845 SCIENTIFIC AMERICAN, INC.

Old News.

The following items, are late, having been on hand two or three weeks: but as they may be new to some, and we think them worth saving, we give them a place in this corner.

"TAKE MY HAT."—An enthusiastic New Yorker lately made a visit to one of the lakes, and after witnessing a storm on old Ontario, found himself safe and sound on the brink of the mighty cataract. What he did there is thus related by the Rochester American:—"On the morning of our arrival, we proceeded to the American Fall, not a word was said by our companion. We next went to the Horse Shoe Fall, and after gazing for some minutes upon its untold sublimity, each seemed anxious to hear an expression of the first impressions of our hero. He stood like a statue perfectly motionless. I saw the blood rushing to his head. His eyes and face assumed a most fearful expression. I started towards him—not a little alarmed, and was about to take his arm, when he suddenly raised his hand to his head, violently throwing its covering into the cataract, exclaiming, 'there—*take my hat!*"

A bald eagle flew on board the U. S. ship John Adams, at sea, he fared well, not being eatable, and became very tame, walking around from mess to mess, getting a crumb here and a drink there. He is now considered one of the crew, and attends to the furling of the royals. He never left the ship until the Princeton anchored at Pensacola, when he alighted on her cross jack yard, took a searching glance, saw all was right, as far as Uncle Sam was concerned, and returned to his own ship. The singular part of this occurrence is that three foreign men-of-war are at anchor near the John Adams, and this republican bird will not visit either of them.

The route from Chagres to Panama, across the Isthmus, has recently been traversed by Mr. Jewett, a newly appointed Chargé of the United States. The distance is sixty-five miles in all, and the journey of a most interesting description. From Gorgona to Panama the road is a mere bridle-path through the forest. Mr. Jewett describes the forest as one continual and most magnificent green house—more beautiful than any he had ever seen planted by the hand of man in the United States.

ENORMOUS CROPS.—To illustrate the enormous extent of the corn crops in Illinois, it is said that the traveller may stand upon a bluff on the road from Alton to Edwardsville, and thence see, without moving from the same spot, by looking only in two directions, fields of standing corn, the probable yield of which is estimated at *one million eight hundred thousand* bushels.

The Cleveland Plaindealer states that on Friday last, eight trunks were broken open in as many rooms of the American House in that city, in search of cash—but without the least success. The boarders did not keep cash id their trunks, it seems. The fellow was seen, and was a well dressed, gentlemanly-looking young man. His present whereabouts is undnown.

Dr. Chilton, the chemist, opposite the Park, in Broadway, N. Y., has a living chameleon, just arrived from Borneo. It changes its colors almost momently, at times. It has the appearance of a lizard, is about sixteen inches in length, and perhaps three or four in circumference. It feeds on flies and other insects, which it catches with its tongue, darting it out with the velocity of lightning, and with unerring accuracy, a distance of at least a foot.

The express with the English mails came from Boston, over the Long Island railroad, with the Hibernia's passengers, in two hours and twenty minutes running time—a rate of 40 miles per hour.

The propeller *Syracuse*, of Oswego, passed up the canal some time ago, filled with emigrants for the western states, and her deck piled up with their 'plunder"—a miscellaneous hodge-podge heap—chairs and a thrashing machine, tables and plows, bedsteads and harrows. Asking a passenger who was on the towing-path, how many he thought there was aboard? he replied, "O, why, I don't know; but there's as many as can ride."

A French cook at the Louisville Hotel, who kept a pair of big rattlesnakes in a box in his room, went to it a few nights ago, and found one of them at large. He undertook to kill the snake with a large knife, but the reptile bit him on the finger. The Frenchman whittled his finger down to the bone, the Journal tells us, and then disposed of the pair of snakes for $8.

At a late cattle-show in Pittsfield, Mass., a new mode was practised to evade the penalty for selling liquor. Passengers were carried back and forth in an omnibus for six cents, and furnished with drink gratis.

ADAMS & Co.'S

GREAT EASTERN, SOUTHENR, AND WESTERN

DAILY PACKAGE EXPRESS.

ADAMS & CO. respectfully give notice that their arrangements for their various Expresses have been perfeeted with the greatest care, and enable them to forward, with the utmost security and rapidity, and at moderate rates, Merchandize of every description, viz.:—Boxes, Bundles, Packages, Specie, Bank Notes, samples, valuable papers, &c. &c., to

Boston,	Hartford,
Worcester,	Sprinfield,
Norwich,	Philadelphia,
New London,	Baltimore,
New Haven,	Washington, D.C.
Fredericksburg, Va.	Wilmington, N. C.
Richmond,	Charleston,
Norfolk,	Savannah,
Portsmouth,	ugusta, Ga.
Petersburg,	Cumberland,
Wheeling,	Pittsburg,
Cincinnati,	Louisville,
St. Louis.	

Our Agents in these several Cities pay particular attention to the collection and payment of Notes, Drafts, Bills, &c., and all other business appertaining to our Express.

In connexion with Messrs. Wilmer & Smith, of Liverpool, we have established an EUROPEAN Express, similar in its design and operation to our American Express, and alike beneficial to the Merchants and Importers of both countries. Custom House business promptly attended to.

Express for the South and West leaves the Office daily, at 1-4 to 3, and half past 4 P.M.

Express for the East at 1-4 to 5 P. M.

Merchants and others will bear in mind, we run the only Express Cars between New York and Baltimore.

nov9 ADAMS & CO., 17 (late 7) Wall st.

ALLEN STREET

DYER AND COAT RENOVATOR.

COATS Renovated at 50 cents; Vests, 12 1-2; Ladies' Dresses Dyed, from 50 cents to $1,00;
Parasols and sun shades cleaned at 25 cents;
Carpets cleaned whole at 6 cents per yard;
Hearth rugs cleaned or dyed;
Velvet of all descriptions cleaned or dyed;
Crapes or gauzes dyed; blankets cleaned;
Gentlemen's clothes repaired.

N.B.—Terms, cash. T. SMITH,
s18 No. 70 Allen st., near Grand, N.Y.

JOHN BROWN.

CARPENTER & PRINTER'S JOINER,

Nos. 29 & 61 Ann-street, N. Y.

MANVFACTURER of Cases, Stands, Furniture, &c. Stereotype Blocks, of various sizes.
Box-wood and mahogany, for Engravers, always on hand.
Stereotype plates blocked at short notice.
Press, paper, and letter boards, of every description.
Book-binders' cutting and pattern boards.
Stereotype boxes, made to order.
Printers'. stereotypers, type, founders's, and book-binders' jobbing work done at the shortest notice.
N. B. Orders from various seetions of the country solicited, and promptly exeeuted. nov9

GURNEY'S PREMIUM DAGUERRIAN Gallery, 180 Broadway, New York.—Pictures taken at the establishment are not excelled in this country—so say his numerous patrons. The public are respectfully invited to call and judge for themselves.
nov9

JOHN W. DAVIS,

GENERAL DEALER IN

DAILY, WEEKLY, MONTHLY, AND ANNUAL PERIODICALS,

nov9 No. 5 John st., Lowell, Mass.

CUMMINGTON QUINEBAUG SCYTHE STONES.

From the celebrated Robbins' Ledge.

MANUFACTURED by J. S. STAFFORD & CO., Cummington, Mass.—The unprecedented sale of the Cummington Quinebaug Seytne-stones, during two years, has fully established their claim to superiority over all other stones now in use, and renders unnecessary any recommendation from the proprietors.
☞ A continuance of public patronage is respectfully solicited. All orders addressed to J. S. Safford, or Jacob Morse, (sole proprietors,) or Stephen Morse, Agent, Cummington, Mass., will meet with prompt attention.
For sale at all the principal hardware stores. nov9

NEW AND STERLING WORKS

RECENTLY PUBLISHED BY

HARPER & BROTHERS, NEW-YORK.

I.

GENERAL GREEN'S TEXIAN EXPEDITION.

Journal of the Texian Expedition against Mier; subsequent Imprisonment of the Author, his Sufferings, and final Escape from the Castle of Perote, &c. With Reflections upon the present political and probable future Relations of Texas, Mexico, and the United States. By General Thomas J. Green. With numerous Engravings. 1 vol. 8vo. $2 00.

II.

BARNES'S NOTES ON EPHESIANS, &C.

Notes, explanatory and practical, on the Epistels of Paul to the Ephesians, Philippians, and Colossians. By Albert Barnes. 1 vol. 12mo. Engravings. 75 cents.

III.

MORRELL'S AMERICAN SHEPHERD.

The American Shepherd: being a History of Sheep, with their Breeds, Management, and Diseases; illustrated with Drawings of different Breeds, Sheep Barns, Sheds, &c.: with an Appendix, embracing upward of twenty Letters from eminent Wool Growers, &c., detailing their several Modes of Management, &c. By L. A. Morrell. With numerous Plates. 1 vol. 12mo.

IV.

STEWART ON DISEASES OF CHILDREN.

A Practical Treatise on the Diseases of Children. By James Stewart, M.D. New improved Edition. 1 vol. 8vo. $1 50.

V.

REV. JOSEPH WOLF'S JOURNAL.

Narrative of a Mission to Bokhara in the Years 1843-45, &c. By Rev. Joseph Wolf, D.D., LL.D. With numerous Illustrations. (Now Ready.)

VI.

PLATO AGAINST THE ATHEISTS:

With Critical Notes and Dissertations. By Tayler Lewis, LL.D. of New-York University. 1 vol. 12mo. $1 00.

No more acceptable or timely contribution to the cause of sound classical education could possibly have been made than this. The leading objects of the work, even paramount to its relation to education, seems to have been to furnish an antidote to the progressive atheism of the present age.—*Courier and Enquirer.*

VII.

TRAVELS OF MARCO POLO,

From valuable early Manuscripts recently published by the French Geographical Society: with copious Notes by Hugh Murray. 1 vol. 18mo. 50 cents.

This well-known production has long been regarded as unique in geographical science. Marco Polo has justly been styled the "Herodotus of the Middle Ages."—*Evening Post.*

VIII.

HUMBOLDT'S COSMOS.

Cosmos: a Survey of the general Physical History of the Universe. By Alexander Von Humboldt. (Publishing in Numbers.)

A renowned production, by the greatest of scientific writers.—*Courier.*

IX.

DR. ABERCROMBIE'S NEW ESSAYS.

Miscellaneous Essays. By John Abercrombie, M.D., Author of "Inquiries into the Intellectual Powers," &c. 1 vol. 18mo. 50 cents.

These essays will be read with pleasure and profit by all who *will* read them.—*Anglo American.*

X.

MACKENZIE'S LIFE OF PAUL JONES.

A Life of Paul Jones. By Alexander Slidell Mackenzie. 2 vols. 12mo. $1 00.

XI.

MISS BEECHER'S DOMESTIC ECONOMY.

A Treatise on Domestic Economy, for the Use of young Ladies at Home and at School. By Catherine E. Beecher. Revised Edition, with many Engravings. 12mo. 75 cents.

A volume of especial value to the domestic circle, comprising a large amount of important instruction respecting the duties of domestic life and the educational training of females.—*Courier.*

XII.

THE DUTY OF AMERICAN WOMEN TO THEIR COUNTRY.

1 vol. 18mo. 37½ cents.

This appeal might well be in the hands of every female in the land; its design is to aid in the correction of abuses in several departments of popular education. We therefore commend the volume to the especial notice of our readers.—*Commercial Advertiser.*

XIII.

A PILGRIMAGE TO TREVES,

Through the Valley of the Meuse, and the Forest of Ardennes. By C. Edward Anthon, Esq. 1 vol. 75 cents.

A very pleasing and more than ordinarily useful book of travels.—*Evangelist.*

The volume is replete with antiquarian lore relating to the city of Charlemagne, and the renowned city of Treves. It is evidently the work of a scholar, and cannot fail to enlist a profound interest.—*Onoego Advertiser.*

XIV.

ENCYCLOPÆDIA OF DOMESTIC ECONOMY.

A complete Repertory of all Matters connected with the Economy of Housekeeping. By T. Webster, Esq. Edited, with Additions, &c., by an American Physician. Copiously Illustrated. $3 50.

This is decidedly a book for the million: it contains all that precise kind of information adapted to the use of families, and which one may seek for in vain elsewhere.—*New-York Evening Gazette.*

XV.

BISHOP THIRLWALL'S HISTORY OF GREECE

Complete in 2 volumes, 8vo. $3 50.

This, as a general history of Greece, is, perhaps, superior to any other in the English language.—*Biblical Repository.*

Thirlwall's Greece is now universally acknowledged to be the best work ever written of its class.—*Albany Journal.*

XVI.

ANTHON'S LATIN VERSIFICATION.

A System of Latin Versification, in a Series of Progressive Exercises, including Specimens of Translation from English and German Poetry into Latin Verse. By Charles Anthon, LL.D. 1 vol. 12mo. 90 cents.

XVII.

PROF. WHEWELL'S MORALITY AND POLITY.

Elements of Morality, including Polity. By William Whewell, D.D. 2 vols. 12mo. $1 00.

A book which ought to be read, because it cannot be read without advantage. The age requires such books.—*London Athenæum*

XVIII.

PRAISE AND PRINCIPLE;

or, For what shall I Live? By the Author of "Conquest and Self-Conquest." 1 vol. 18mo. 37½ cents.

The story is really admirable—equal to Sandford and Merton, and somewhat resembling it in general tone and manner.—*Broadway Journal.*

XIX.

DR. BLAIR'S SERMONS.

Sermons. By Hugh Blair, D.D., F.R.S., &c. To which is prefixed the Life and Character of the Author. By James Finlayson, D.D. Complete in 1 vol. 8vo. $1 50.

A BOOK FOR EVERY FAMILY!

Which can be mailed at Periodical Postage to any part of the United States.

SEARS' PICTORIAL HISTORY OF THE REVOLUTION.

TO THE PEOPLE OF AMERICA.

A Beautifully Illustrated Volume—purely American in its character and design, forming a large and handsome octavo of betweeen FOUR AND FIVE HUNDRED PAGES; with several hundred engravings! ☞ All Postmasters are hereby authorized to act as Agents.

PRICE $1 50 IN FANCY PAPER COVERS.

THREE DOLLARS (remitted free of postage) will pay for two copies of the entire work; and in order to facilitate remittances from post-towns, the publisher will send, to persons disposed to club,

FIVE COMPLETE COPIES FOR SEVEN DOLLARS;
AND TEN FOR TWELVE DOLLARS,

☞ *The money to be in as current funds as possible, and sent, post paid, in advance.*

THE TITLE OF THE WORK IS AS FOLLOWS:—

THE PICTORIAL HISTORY

OF THE

AMERICAN REVOLUTION;

WITH AN ACCOUNT OF THE EARLY HISTORY OF THE COUNTRY,
THE CONSTITUTION OF THE UNITED STATES,
AND A CHRONOLOGICAL INDEX;

Illustrated with several hundred Engravings!

☞ It is the determination of the publisher to spare neither pains nor expense to make this work perfectly accessible to *every family throughout the entire country.* It will be one of the most attractive and cheapest ever presented to the patronage of the American people. The preparation of the work has been attended with great labor and expense. HISTORY requires a distant eminence, from which to take an impartial view of the character of the transactions which submit themselves to the recording pen: but more than half a century has now elapsed since the colonists first asserted their independence; and the generation, whose arduous struggles achieved so glorious a result, has passed away to the silent tomb.

Through the whole work, the editor has aimed to do justice without asperity; to applaud patriotism, but not to justify its excesses; to condemn tyranny, but not to overlook the virtues of many of its instruments; and to exhibit the kindly prospect of the FUTURE more strongly than the irritating aspect of the PAST. The great interest that the bare mention of such a work is calculated to excite, has encouraged the editor to make it every way worthy of a liberal patronage. An extensive sale can only enable the publisher to offer it at the low price proposed. Postmasters and others wishing to act as Agents, will receive all necessary information by addressing, *post-paid,*

ROBERT SEARS, 128 Nassau street, New York.

AN EDITION WILL ALSO BE BOUND UP IN MUSLIN, GILT. PRICE TWO DOLLARS.

☞ TWO VALUABLE PUBLICATIONS FOR THREE DOLLARS.—Sears' beautiful Pictorial FAMILY MAGAZINE for one year, and the above work complete, will be furnished for *Three Dollars*, remitted in New York or Eastern funds, free of postage, through the postmasters.

☞ Newspapers copying the above, well displayed, and giving it twelve insertions, shall receive a copy of the work sent as they shall direct.

GALVANIC RINGS

AND

MAGNETIC FLUID.

DR. CHRISTIE, the original inventor and patentee of these celebrated articles, informs the public, that the ONLY place in New York to obtaim them GENUINE is a 134 Fulton street, (Sun building.) In all cases of RHEUMATISM and Nervous Complaints, no matter how chronic or severe in their character, the GALVANIC RINGS and MAGNETIC FLUID are a *positive* and *permanent* cure, and every day brings fresh evidence of their wonderful efficacy in cases where every thing else has entirely failed.

☞ Bear in mind, that all articles of the kind not obtained at 134 Fulton street, Sun Building, are base and worthless counterfeits.

For sale in any quantity, and at prices within reach of all. Pamphlets can be obtained gratis. nov9.

GENERAL PERIODICAL DEPOT.

HALIBURTON & CO.

No. 11 State street, Boston.

ARE constantly supplied with all the most fashionable and attractive Magazines and other periodicals, together with a variety of cheap literary works, pictorial papers, and elegant prinis. nov13

GENERAL AGENTS.

Haliburton & Co., 12 State street, Boston.
Colon & Adriance, 21 Arcade, Philadelphia.

LOCAL AGENTS.

C. A. Hinckley, 122 Baltimore st., Baltimore.
Lees Garside, Corner of Main and Market streets, Paterson, N. J.
J. W. Davis, Lowell, Mass.
W. H. Pratt, Sprinfield, Mass.
H. P. Barnes, Pittsfield, Mass.
T. Dickinson, Newark, N. Y.
E. Hopkins, Lyons, N. Y.
William M. Beauchamp, Skaneatles, N.Y.
Peter Cook, Hartford, Ct.
W. & E. Downes, New Haven, Ct.
William Woodward, Middletown, Ct.
S. Jones, Colchester, Ct.
J. Hunter, Thompsonville, Ct.
H. S. Snow, Meriden, Ct.
Safford & Parks, Norwich, Ct.
Col. A. P. Chesley, Huron, O.
Chas. O'Neal, Darien, Ga.
Major J. Nathans, Quincy, Flo.
Daniel Cobb, Providence, R. I.
H. J. Pitman, Bristol, R. I.
R. Kidney, jr., 123 Broad street, Newark, N. J.
W. Solomon, New Brunswick, N. J.
Thomas Boynton, Windsor Vt.
Shipley W. Ricker, South Berwick, Me.
W. H. Ward, Washington, D. C.
J. Buffam, Nashua, N. H.
David P. Perkins, Manchester, N. H.

TRAVELLING AGENTS.

Clark Silleck.
John Mc'Donald.
Rufus K. Porter.

PLUMBE NATIONAL DAGUERRIAN GALLERY

OF PATENT PREMIUM COLOURED LIKENESSES.

FOUNDED 1840.

No. 205 Baltimore-St., Baltimore, adjoining Campbell's Jewelry Store.

No. 251 Broadway, cor. Murray-St., N. York.	No. 449 Main-street, Louisville, Ky.	Harrodsburgh Springs, Ky.
No. 75 Court-street, Boston,	Sycamore-street, Petersburgh, Va.	Main-street, Newport, R. I.
Broadway, Saratoga Springs,	Lyceum Hall, Alexandria, D. C.	Main-street, Du Buque, Iowa,
Pennsylvania Avenue, Washington, D. C.	No. 136 Chesnut-St., Philadelphia,	No. 176 Main-St., Cincinnati, Ohio.

Corner of Fourth and Chesnut-streets, St. Louis, Mo.

Constituting the oldest and most Extensive Establishment of the kind in the World, and containing more than a thousand portraits, embracing those of the most distinguished individuals in the U. States.

This Establishment having been awarded the *Medal, Four First Premiums*, and *two "Highest Honors"* at the Exhibitions at Boston, New York and Philadelphia, respectively, for best Pictures and Apparatus, is thus officially sustained in the position of superiority heretofore universally assigned it by the public, as "*First in the World.*"

Price of these superb Photographs reduced to that of ordinary ones at other places, so that no one need now sit for an inferior likeness on the score of economy.—Taken in any weather.

"Professor Plumbe.—Every body knows that this distinguished artist stands at the head of his profession in this country."—*True Sun.*

"Prof. Plumbe.—This celebrated Photographer has long been regarded as the American Daguerre."—*N. Y. Herald.*

Plumbe's Premium and German Apparatus and Instructions, Plates, Cases, &c., at the lowest rates

JOHNSON'S

DINING SALOON,

No. 144 FULTON STREET.

(Near Broadway): New York.

BILL OF FARE.

Roast Turkey,	18d	Boiled Ham,	6d
" Goose,	18d	Pork and Beans,	6d
" Chicken,	18d	Veal Pie,	6d
" Duck,	18d	Beef Steak Pie,	6d
" Beef,	6d	Chicken Pie,	12d
" Pork,	6d	Mush and Milk,	6d
" Veal,	6d	Rice and Milk,	6d
" Lamb,	6d	Lamb Pot Pie,	6d
" Pig,	12d	Fried Fish,	6d
Boiled Chicken,	12d	Fried Clams,	6d
" Mutton,	6d	Ham and Eggs,	12d
" Corned Beef,	6d	Chicken Soup,	6d
" Pork,	6d	Beef Soup,	6d
" Fish,	6d	Coffee,	6d

DESSERT.

Suet Pudding,	6d	Mince Pie,	6d
Indian Pudding,	6d	Apple Pie,	6d
Rice Pudding,	6d	Peach Pie,	6d
Plum Pudding,	6d	Plum Pie,	6d
Bread Pudding,	6d	Pumpkin Pie,	6d
Apple Dumplings,	6d	Custard Pie,	6d

BREAKFAST AND TEA.

Beef Steak,	6d	Hot Corn Bread,	6d
Veal Pie,	6d	Indian Cakes,	6d
Mutton Chops,	6d	Boiled Eggs,	6d
Ham and Eggs,	12d	Fried Eggs,	6d
Fried Tripe,	6d	Toast,	6d
Fried Sausages,	6d	Hot Muffins,	6d
Fried Fish,	6d	Hot Rolls,	3d
Fried Clams,	6d	Tea,	3d
Fried Liver,	6d	Coffee,	3d

LEE & CO.'S

WIRE WINDOW SHADES,
do. FIRE SCREENS,
do. GRATE do.
do. HALL AND OTAER DOORS, &c.

MANUFACTURED to order, in great perfection, of any size or shape, and elegantly painted with any Landscape, Lettering, or other devices or colors required.

These Shades, for which we received the highest premium at the two late Fairs of the American Institute, are unlike all others, in the following particulars:—

They admit all the Air and Light into the room.
They admit a full view to the street from the room.
They obstruct the view from the street into the room.
Taey keep out all Mosquitos, Flies, and other insects.
Tney are very durable, being heavily coated with oil paint.
They are extremely ornamental.

By sending your address, (if in the city,) you will be called upon and every explanation given.

Offices, No. 577 Broadway, opposite Niblo's, and No. 18 Factory street, between Waverly Place and Amos street, N. Y.

*** Manufactured in Sheets for the Southern and Western markets.

A. G. BAGLEY'S CELEBRATED IMPROVED

EVER POINTED GOLD PEN.

THIS Pen received the highest premium at the last Fair of the American Institute, and has been pronounced by the first teachers of Penmanship in the country to be infinitely superior to any Gold Pen ever before introduced to the American public. The lasting properties of this Pen are undoubted, owing to the total absence of corrosibility from any of the inks in use, and the peculiar shade of the nibs, (which was first introduced by Bagley, (makes it more pleasant to use, renders it less liable to damage, more easy to repair, and prevents the necessity of the great care that other articles of the kind require.

MANUFACTORY, 189 Broadway, N. Y. nov9.

FARNAM'S PATENT HYDRAULICS.

D. L. FARNAM,

(29 FULTON STREET, N. Y.)

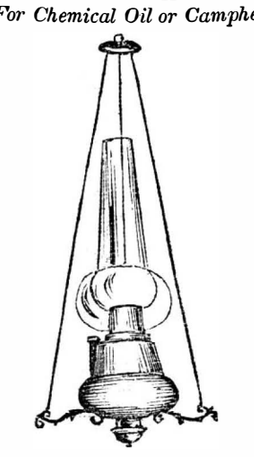
MANUFACTURER OF

Fire Engines,	Water Wheels,
Garden Engines,	Horse Powers,
Lift and Force Pumps,	Leather Hose,
Air Pumps,	Hose Coupling Screws,
Wind Mills,	Cast Iron Fountains,
Figures and Shells,	Lead Pipe, Brass Work,
&c.	&c.

nov9

HORN'S PATENT SOLID BOTTOM GLASS FOUNTAIN LAMPS.

For Chemical Oil or Camphene.



Manufactured by J. O. FAY, 136 Fulton, st. Sun Buildings; wholesale and retail,

THESE LAMPS have become universally celebrated and admired by all who use them. for their neat appearance and splendor of light; they are, in fact the most perfect lamp ever invented for camphene or chemical oil. Try all others, but don't fail to try the best, the cheapest, and, above all, the lamps that will give the greatest light with the least expense; they are the most simple and easy to manage and trim; cannot corrode or become heated while burning; easily cleaned inside and out, and not affected by a draft. They are perfectly safe to use at all times, as an oil lamp. Less than half a cent per hour will give you a splendid light! "TRY ONE."

N. B. Stand or Parlor Lamps; also for stores, hotels, and churches, &c.; splendid chandeliers made to order—at reduced prices—cheaper than any other camphene lamp, and of superior quality. nov13

J. M. DOLAN,

SCOURER AND CLOTHES RENOVATOR.

HAS the pleasure to announce to his customers and their friends, that he has a New Composition for removing stains, without injury to the cloth, (having a thorough knowledge of material used in the manufacture of eloth,) and restore its original color, without injury, on the most reasonable terms.

Gentlemen, this is worthy your attention. Please call and examine for yourselves, at

561 Pearl st., one door from Broadway.

☞ J. M. D. will call in any part of the city for their accommodation. Altering and repairing with neatness throughout. sep18

HENRY ROWNTREE,

IMPORTER OF, AND DEALER IN

Mechanics' Tools, Hardware, and Cutlery,

No. 60 Chatham-st., (cor. of Chambers.)

AT the Tool Store, No. 60 Chatham street, corner of Chambers, at the sign of the Saw, Axe, and Plane, will be found good Tools suitable for the following branches of trade,—

Blacksmiths,	Engravers,	Hatters,
Brushmakers,	Farriers,	Last-makers,
Carpenters,	Furriers,	Masons,
Cabinet Makers,	Gardeners,	Machinists,
Coach Makers,	Glaziers,	Millwrights,
Carvers,	Glovers,	Plumbers,
Coopers,	Gunsmiths,	Pattern-makers,
Chair-makers,	Saddlers,	Shoemakers,
Silversmiths,	Tanners,	Tinners,
Upholsters,	Watchmakers, & Wheelwrights.	

Which being made expressly to my orders, will be found good, and the mechanic may place confidence in them.

H. R. assures his friends that he has no connection with any other store, and that at his store, State Prison Tools are NOT SOLD OR KEPT. nov9

PATENT AGENCY.

DRAWINGS and specifications of machines, with other papers requisite for procuring Patents of New Inventions, will be furnished at short notice, at the office of the Scientific American. No charge will be made for advice or instructions on the subject of securing Patents.

ALEX. MACDONALD: PRINTER.

© 1845 SCIENTIFIC AMERICAN, INC.